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Reasons for Volunteering, Experiences, and Outcomes for Mississippi State University Extension Service Master Gardener Volunteers

Jeffrey Claude Wilson

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REASONS FOR VOLUNTEERING, EXPERIENCES, AND OUTCOMES FOR
MISSISSIPPI STATE UNIVERSITY EXTENSION SERVICE MASTER
GARDENER VOLUNTEERS

By

Jeffrey Claude Wilson

A Dissertation
Submitted to the Faculty of
Mississippi State University
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy
in Agricultural Information Science and Education
in the School of Human Sciences

Mississippi State, Mississippi

August 2009

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By

Jeffrey Claude Wilson

Approved:

Michael E. Newman
Professor, Agricultural Information Science
and Education
(Director of Dissertation)

Ronnie White
Extension Professor, Agricultural
Information Science and Education
(Committee Member)

Jacquelyn P. Deeds
Professor, Agricultural Information Science
and Education and Graduate Coordinator
(Committee Member)

Walter N. Taylor
Professor, Agricultural Information
Science and Education and
Asst. Dean, College of Agriculture
Life Sciences
(Committee Member)

Melissa Mixon
Interim Dean, College of
Agriculture and Life Sciences

Name: Jeffrey Claude Wilson

Date of Degree: August 8, 2009

Institution: Mississippi State University

Major Field: Agricultural Information Science and Education

Major Professor: Dr. Michael Newman

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Candidate for Degree of Doctor of Philosophy

The purpose of this study was to describe the current Master Gardener and County Director perceptions of the Mississippi Master Gardener program. Participation for both groups was voluntary and the Master Gardeners were chosen through random sampling. In the final sample, a total of 43 County Directors and 233 Master Gardeners completed the survey. The dependent variable was motivation functions: Understanding, Values, Enhancement, Protect, Social, and Career. The independent variable was group, which included Master Gardeners and County Directors.

Results showed that Master Gardener's highest ranked reasons for volunteering were related to the Understanding, Values, and Enhancement functions. They volunteered to learn more about horticulture and to help others. Data also showed that volunteers were very satisfied with their overall Master Gardener experience. Eleven of the twelve questions ranked above 5.0 on a scale of 1 to 7. Master Gardener's highest ranked perceptions of the benefits of the program were also related to the Understanding,

Values, and Enhancement functions. County Director's highest ranked perceptions of benefits of the program were related to the Understanding, Values, and Social functions.

DEDICATION

Volunteering to help those who are less fortunate than oneself is a crucial aspect of a complete and advanced society. The Master Gardener program is a perfect example of this volunteering in action. These county groups help those in need through their projects in the local communities. Their example, along with the example set forth before me by my own parents, led me to endeavor on this study.

Therefore, I dedicate this work to my wife, daughters, parents, and in-laws as a reminder that we can all make a difference if we volunteer of ourselves and give back to our local community

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CHAPTER I

INTRODUCTION

People have been gardening throughout the centuries, and numerous methods have been used to grow and maintain these gardens. The Extension Service has been assisting with these gardens and other aspects of daily life since the early 1900's (Smith-Lever Act, 1914). Through this assistance from the Extension service, gardeners have learned proper methods of designing, planting, maintaining, and harvesting their gardens.

One study found that a necessity for Extension services was the need for relief from an ever-increasing public demand for gardening information and assistance. This need has overburdened Extension's resources and its capacity to respond to clients' gardening needs. One method Extension services have utilized since 1972 to relieve this burden is to have adult Master Gardener volunteers assist agents in disseminating gardening (horticulture) information to its clients (Grieshop & Rupley, 1984).

Limited budgets and downsizing have threatened program availability, expansion, and staffing. Such events have forced Extension services to reexamine the delivery of their programs, technological information, and services. One method to maintain the current level of programs and services is to properly manage Extension volunteers (Rohs & Westerfield, 1996; Rohs, Stribling, & Westerfield, 2002). Managing these volunteers through efficient motivation and retention is critical in achieving success for Extension service programs (Schrock, Meyer, Ascher, & Snyder, 2000a). The perceptions of how

the Mississippi State University Extension Service (MSUES) goes about motivating and maintaining these Master Gardener volunteers are of interest in this study.

Motivation

Motivation and retention are very closely connected when discussing the management of adult volunteer leaders. Keeping volunteers motivated is a critical part of maintaining or retaining them within that program. Clary et al., (1998) showed that Master Gardener volunteers who receive functionally relevant benefits are more likely to be satisfied with their volunteer experience and to remain active in the program. Matching volunteer tasks to their motivations is one way to create a meaningful volunteer experience (Schrock, Meyer, Ascher, & Snyder, 2000b). It has been found that there are even a few differences between paid staff and non-paid volunteers. Some volunteers had a higher intrinsic motivation than did paid employees (Adams, Schlueter & Barge, 1988).

In a study by Schrock et al. (2000b), Master Gardener volunteers rated the highest overall motivating factors as being related to increased knowledge and understanding. These were followed by values and enhancement benefits, with social aspects and career related motivational factors being rated the lowest. This shows that most volunteers were looking for a greater personal knowledge in that specific area of training.

Retention

Maintaining and keeping volunteers active year after year takes a great deal of time, effort, and expense by Extension employees. Retaining these good volunteers is one way Extension services can reduce their program costs (Meyer & Hanchek, 1997). The natural flow of members in and out of voluntary groups depends on competition with

other groups for members' time and resources. Voluntary organizations lose fastest those members who are either atypical of the group or whose characteristics match closely with those of other group's members (Popeilarz & McPherson, 1995).

Having members with similar characteristics may help to retain them in the program. Providing these volunteers with ongoing learning opportunities beyond their initial training is also important in maintaining their interest in the program (Schrock et al., 2000b). With proper understanding of motivation, Extension professionals can hopefully have higher retention rates for Master Gardener volunteers.

Statement of the Problem

People have been gardening throughout the centuries and numerous methods have been used to grow and maintain these gardens. The Extension Service has been assisting with these gardens and other aspects of daily life since the early 1900's (Smith-Lever Act, 1914). With fewer personnel and limited travel budgets, Extension services are looking for more productive means of disseminating research-based information to its' clients. One method of doing this is through the use of adult Master Gardener volunteers.

Through programs such as the Master Gardener Volunteer Training Program, agents and specialists have been able to train adult volunteers to assist the local Extension office with dissemination of horticulture related information to the public. Being able to retain these trained volunteers is important for Extension (Meyer & Hanchek, 1997). The perceptions by both volunteers and County Directors of the management methods that are used to motivate and maintain these volunteers are important to the success of the Extension service's horticulture programs.

Purpose of the Study

The purpose of this study was to describe current Master Gardener and County Director perceptions of the MS Master Gardener program. Participants included County Directors within the MSUES who have an active Master Gardener group in their county and the volunteers within those specified counties. An anchored email survey was given to participants at a specified time to determine their reasons for volunteering, their level of satisfaction with the program, and their perception of the overall benefits of being involved with the Master Gardener program.

Research Objectives

1. Describe MS Master Gardeners' factors that motivated them to volunteer.
2. Describe MS Master Gardeners' current levels of satisfaction.
3. Describe MS Master Gardeners' perceptions of the benefits of the program.
4. Describe MS County Directors' perceptions of the benefits of the program.
5. Compare MS County Directors' and Master Gardeners' perceptions of the benefits of the program.

Significance of the Study

With decreased personnel and declining travel budgets for Extension services, assistance with the dissemination of horticulture information has become very important. Master Gardener volunteers who help relate this information need to receive proper horticulture training to effectively assist the MSUES with its clients gardening needs. They need to receive this information in a timely and understandable manner in a way that motivates them to volunteer their time and efforts. Determining what factors lead to

motivation and retention of these volunteers would be valuable information for the management of the MS Master Gardener program.

Operational Definitions

The following terms are defined to provide a better understanding of the research and were found during the literature review process. The definition given is for the specific purposes of this study.

Reasons for and Benefits of Volunteering:

Understanding – People volunteer to receive new learning experiences. For this study, understanding will be operationally defined as the score on an understanding anchored scale developed by Clary, et al., 1998.

Values – People volunteer to act on important values, such as humanitarian concerns for others. For this study, values will be operationally defined as the score on a values anchored scale developed by Clary, et al., 1998.

Enhancement – People volunteer to grow and develop psychologically through involvement. For this study, enhancement will be operationally defined as the score on an enhancement anchored scale developed by Clary, et al., 1998.

Protective – People volunteer to reduce negative feelings of guilt and to protect the ego. For this study, protective will be operationally defined as the score on a protective anchored scale developed by Clary, et al., 1998.

Social - People volunteer to strengthen one's social relationships. For this study, social will be operationally defined as the score on a social anchored scale developed by Clary, et al., 1998.

Career – People volunteer to gain career-related experience. For this study, career will be operationally defined as the score on a career anchored scale developed by Clary, et al., 1998.

Assumptions

1. Receiving horticulture information is important to Master Gardener volunteers.
2. The Extension Service can provide the necessary horticulture information to Master Gardeners.
3. Motivating and retaining Master Gardener volunteers is important to the MSUES.
4. Master Gardener will be able to properly assist gardeners with their horticulture needs.

Limitations

1. The population will be limited to MS County Directors and Master Gardener volunteers who are currently in a county with an active group.
2. Since the population includes only Master Gardeners and County Directors in MS, the results are limited to this population and may not be generalized beyond.

CHAPTER II

LITERATURE REVIEW

People have been gardening throughout the centuries and they have used numerous methods to grow and maintain their gardens. The Extension Service has been assisting with these gardens and other aspects of daily life since the early 1900's (Smith-Lever Act, 1914). A study found that one necessity for Extension services was the need for relief from an ever-increasing public demand for gardening information and assistance. This demand has overburdened Extension's resources and its capacity to respond to client demands (Grieshop & Rupley, 1984). Limited budgets and downsizing have threatened program availability, expansion, and staffing. Such events have forced extension services to reexamine the delivery of programs, technological information, and service. One method to maintain the current level of programs and services is to recruit and retain volunteers (Rohs & Westerfield, 1996; Rohs et al., 2002). This has led to the innovation of the Master Gardener Volunteer Training Program, which began in 1972 in Washington State (Grieshop & Rupley, 1984).

Master Gardener Volunteers

This volunteer program is a horticulture training program designed to educate adult volunteers about specific horticulture (gardening) topics, in order for the Extension service to receive assistance with its' clients gardening needs (Grieshop & Rupley, 1984). The program has a mission to promote gardening, to inform the public about current

horticultural practices, to enhance environmental conservation, and to broaden communities' gardening expertise (Schrock et al., 2000a). One of the program goals has been to provide help for professional staff by training and using qualified adult volunteers to respond to the client demand for advice and help. These volunteers are trained to extend to the public reliable and useful information on gardening and practical horticulture (Grieshop & Rupley, 1984).

The Master Gardener volunteer program began in MS in 1992. Since its' inception, it has grown to 51 counties, with a total of over 770 volunteers. In 2007 alone, these volunteers contributed their expertise over 11,000 times to make more than 78,000 contacts. Since 2004, these volunteers have made over 280,000 horticulture contacts to assist the MSUES (Mississippi Master Gardener Web site, 2007). These trainees may receive horticulture education in the areas of: botany, soils, fruits, vegetables, ornamentals, insects, diseases, turf management, weed management, and other selected topics (Kelly, 2005). Other states also cover additional topics, such as: herbaceous plants, interior gardening, food production, wildlife management, pesticide use and safety, pruning shrubs and trees, and communication skills (Meyer & Hanchek, 1997).

Master Gardener volunteers are utilized in numerous methods by the Extension service. They have been used to answer telephone calls, perform home visits, write articles for print media, utilize radio and TV, speak to groups, coordinate activities, assist at Extension events, and even maintain public gardens (Grieshop & Rupley, 1984).

Research showed that most (55%) Master Gardener volunteers were over 50 years of age, were female (69%), were married (84%), and had children (79%). Fifty-three percent were homemakers or retirees. Most lived in a suburban area (57%), had lived

there at least 10 years (42%), and had incomes greater than \$50,000 per year (52%).

Around 80% had completed high school and 35% had also completed college. Over 90% did not have spouses that were Master Gardener volunteers. Knowing these demographics can help coordinators identify persons who will be more likely to volunteer and possibly raise retention rates (Rohs & Westerfield, 1996; Rohs, et al., 2002).

Master Gardener volunteers are not the only volunteers that are used by Extension Services. Andrews and Hogarth (1986) used the Master Money Managers program to successfully assist young families with their financial management. The 4-H adult volunteer program is another extremely successful Extension program. All successful county 4-H programs have a cohesive group of adult volunteers helping to lead the way. One county 4-H program in Oregon relied on 300 adult volunteers to support the 1,100 youth members and its' 130 club projects (White & Arnold, 2003).

Concerns

A few concerns of the Master Gardener program have been covered in previous research. One concern is whether it is cost-effective for Extension services. Meyer and Hanchek (1997) found the initial cost of training volunteers was quite low when one considers the number of hours a volunteer will typically contribute to the Extension service and the community. A study of Texas Master Gardener data from 2003 found that 5,450 volunteers participated in programs in 110 Texas counties. These volunteers provided a total of 353,643 service hours to the Texas Cooperative Extension, equating to an economic value of \$5.8 million (Texas Master Gardener Web site, 2004a).

A second concern was whether having a county Master Gardener group actually creates more work for Extension agents. Grieshop and Rupley (1984) found that having

a county group did increase the visibility of the Extension service in the community. They also found Extension employees were able to devote more time to other work areas because of this assistance. There was also found to be a decrease in time spent by agents on individual contacts, telephone calls, and writing articles for the media. The most notable change occurred in the type of work performed by the Extension agent. More group educational and organizational activities were being undertaken, allowing for greater agent production (Wolford, Cox, & Culp, 2001).

A third concern was whether the trained volunteers can give sound practical advice. Grieshop and Rupley (1984) found that in most all cases this was not a concern, since volunteers provided as accurate horticultural information as did professional staff. Wolford et al. (2001) found that the master volunteer program provided many advantages as a program delivery method by increasing expertise in subject area, building a strong support base, allowing in-depth programming time for agents, increasing self-esteem of participants, and providing volunteer hours for Extension programming.

Schrock et al. (2000a) noted that managing these volunteers through proper motivation and retention practices is critical in achieving success for Extension services. How the MSUES goes about managing these adult Master Gardener volunteers through motivation and retention was of interest in this study.

Motivation

The most extensive study done to date regarding Master Gardeners motives for volunteering was done by Rohs and Westerfield (1996). Their survey studied the combined broad factors of social background, societal and community benefits, personal

benefits, and influence of other individuals to determine the relative importance of factors influencing volunteering.

Motivation and retention are very closely connected when discussing the management of volunteer groups (Schrock et al., 2000b). The relationship between volunteers and the organizations they serve is dictated by two elements: volunteer motivations and organizational needs (Culp & Schwartz, 1999). Keeping volunteers motivated is a critical part of maintaining or retaining them within that program. Matching volunteer tasks to their motivations is one way to create a meaningful volunteer experience (Schrock et al., 2000b).

Atkinson and Birch (1978) described three categories of motivation: achievement, affiliation, and power. Achievement motives are those which influence individuals to take pride in accomplishments and have a desire to achieve excellence. They typically avoid both low-risk and high-risk situations, prefer to work alone, and need regular feedback. Affiliation motives influence people to be most concerned about their relationships with other people or groups. They typically need to be accepted by others, tend to conform to the group norm, and usually perform well in customer service and client interaction situations. Power motives drive a desire for control and influence. Those seeking to influence tend to have greater success than those seeking control (McClelland, 1953).

These three motivation categories were first described by McClelland (1953) in his Acquired-Needs Theory. He stated that individual's specific needs are acquired over time and are shaped by one's life experiences. These needs can be classified in these

three ways and a person's motivation and effectiveness in certain roles are influenced by these needs.

Alderfer (1972) described motivation factors through his ERG Theory. This theory describes needs as a hierarchy with three levels: Existence, Relatedness, and Growth. Existence refers to psychological and safety needs such as hunger and thirst. These are related to Maslow's first two levels. Relatedness refers to Social and external esteem needs such as involvement with family, friends, and co-workers. These are related to Maslow's third and fourth levels. Growth refers to self-actualization and internal esteem needs. These are related to Maslow's fourth and fifth levels. This model is hierarchical in that existence needs have priority over relatedness needs, which have priority over growth. This model is flexible and allows for a wider range of observed behaviors.

The ERG Theory is based on the work of Maslow, but differs in a few important aspects. This model allows for different levels of needs to be pursued simultaneously. It also allows for the order of the need to be different for different people. This theory also allows for the fact that if a higher level remains unfulfilled, the person may regress to lower level needs that appear easier to satisfy. This is referred to as the Frustration-Regression principle.

Clary et al. (1998) showed that volunteers who receive functionally relevant benefits are more likely to be satisfied with their volunteer experience and to remain active in the program. It has also been found that there are few differences between paid staff and volunteers. In some cases volunteers had an even higher intrinsic motivation than did paid employees (Adams et al., 1988).

In a study by Schrock et al. (2000b), Master Gardener volunteers rated the highest overall motivating factors as being related to increasing knowledge or understanding, and as being related to values benefits. Enhancement benefits, with social aspects, protecting one's ego, and career related motivational factors were each subsequently rated lower. In examining the data for specific motivations for volunteering, 9 of the top 10 reasons for doing so were related to new learning experiences (understanding), altruism, and humanitarian concern (values). The two top reasons reported were to learn more about home gardening and horticulture and to learn through direct, hands-on experience. This shows that these volunteers were looking for a greater personal knowledge in that specific area of training.

Simonson and Pals (1990) found similar primary results for joining the program in Idaho where participants enrolled to increase knowledge for themselves. Finch (1997) found that the horticulture information available was the most important reason for joining and remaining active in the program in a Texas study. Carlton (1981) found a preference for more hands-on training activities among volunteers. Rohs et al. (2002) showed that reputation or status of the organization or program attracted persons and influenced participation. It was surprisingly found that only 5.6% joined the program with the primary of goal of helping others (Simonson & Pals, 1990), whereas, Boyer, Waliczek and Zajicek (2002) found 32.6% joined to share skills with others and give back to the community.

White and Arnold (2003) found that 4-H volunteers reported that the ability to help others and the satisfaction they received from helping others were two of the main benefits received from volunteering. A third reason was that the volunteer had a child

involved in 4-H. They also noted that these volunteers were motivated by a desire to contribute and to feel good about themselves rather than by extrinsic benefits. They found that volunteers enjoy helping others and meeting and working with other volunteers. They were said to appreciate the warmth, friendliness, caring, and concern of fellow volunteers. These aspects are closely related to the feeling and desires of Master Gardener volunteers and other 4-H volunteers (Culp & Schwartz, 1999).

Schrock et al. (2000a) found that in at least one study that demographic information may be a poor predictor of motivation for volunteers. Exceptions may include age and gender. Younger Master Gardeners and women are more likely to be motivated by career related reasons. In addition, women are more likely to volunteer because they feel compassion toward people in need. They also noted that since the knowledge factor is so important to nearly all volunteers, it is vital to provide continued learning such as: advanced learning opportunities, periodic updates, newsletters, and hands-on trainings.

A study by Rohs and Westerfield (1996) found that demographics may be a useful predictor of motivation for volunteers. Those who were married were more likely to volunteer than those who were not married. Also, the older the individual, the more likely they were to volunteer at the county level. Lastly, volunteers employed in business and industries were more likely to devote more time at area and state levels than those in occupational categories. Rohs et al. (2002) found that the five items most personally attractive to volunteers were: status, flexibility of the program, quality of the learning materials, rewards for being a Master Gardener, and excellence of training. These

findings affect how volunteers are recruited and how they are retained. This leads to the next concern of volunteer retention.

Retention

Motivating and retaining active volunteers over time takes a great deal of time, effort, and expense by Extension employees. Retaining these volunteers is one way Extension services can reduce their program costs (Meyer & Hanchuck, 1997).

Retention of Master Gardener volunteers offers several advantages for the program. Retained volunteers have increased horticultural knowledge and experience. They can therefore serve as walking advertisements for the program to assist with future volunteer recruitment. They can also serve as mentors to new volunteers to encourage their rapid involvement in the program (Stouse & Marr, 1992).

Gilliland (1977) stated that the greatest challenge to Extension agents is retaining the volunteers they recruit. The turnover rate of volunteer leaders affects the volunteers, the club members, and the county Extension office. The organization needs volunteers who are committed to their voluntary participation in the system.

Retention of these volunteers can be accomplished in several ways. The best method may be by discouraging volunteers from thinking of their hours as 'payback' for their basic training, but more as opportunities for continued learning, relating to the volunteers an ongoing learning relationship (Stouse & Marr, 1992).

It is known that the flow of members in and out of voluntary groups depends on competition with other groups for members' time and resources. Voluntary organizations lose fastest those members who are either atypical of the group or whose characteristics

match closely with those of other group's members. This shows that voluntary associations are overwhelmingly homogeneous (Popeilarz & McPherson, 1995).

Providing these volunteers with ongoing learning opportunities beyond their initial training is important in maintaining their interest in the program. It has been stated that retention rates could possibly be improved by increasing the amount of praise and recognition given to the volunteers (Schrock et al., 2000b). Wolford, Cox, and Culp (2001) also stated that in an attempt to increase gender equity, strategies should be developed to increase male participation.

Moravec (2006) noted in a Colorado Master Gardener study, continuing education programs should focus on diagnostic skills first, then local ecological and horticultural issues. Programs should contain information on perennial plant components of home outdoor landscapes and environmental stewardship should be a central theme. These Master Gardener volunteers preferred lectures, presentations, local field trips, and hands-on-activities. With proper understanding of motivation, Extension professionals will hopefully have higher retention rates for volunteer programs.

Within 4-H it is known that the county 4-H agent plays a key role in the recruitment and retention of volunteer leaders. With such a high reliance on volunteers to implement programs, there is a necessary level of care, education, and support that must be provided by the agent to ensure the volunteer's success. One of the key factors in successfully managing these complex demands is a stable and satisfied group of volunteers. It becomes clear that understanding the factors involved in becoming a 4-H volunteer, the experience of the volunteer, and the reasons for leaving the volunteer

service can provide useful insights for the agent in managing volunteers (White & Arnold, 2003).

Meyer (2004) found that of those Master Gardener volunteers who left the program, 79% left for personal reasons and lack of time. Other reasons given were: lack of confidence in teaching horticulture, becoming involved in other commitments, and job changes. Dislike, disappointment, not learning required material fast enough, and a steep learning curve were other reasons given for leaving the program.

White and Arnold (2003) found that the number one reason why 4-H leaders left their role was because their children were no longer involved in 4-H. The second and third reasons for leaving were because of time demands. They added that understanding the strengths and weaknesses of the agent/volunteer relationship can help define what can be improved for greater partnerships, possibly reducing the number of volunteer leaders leaving the program. Culp and Schwartz (1999) stated that unfulfilled affiliation motives were the primary impetus for eventual discontinuation of the volunteers' service to 4-H. With these things in mind, it is clearly important to outline the expectations of the program at the beginning to avoid a loss of volunteers.

Implications

In order to successfully recruit adult volunteers, Extension agents should focus on the positive name recognition of the Extension service; the volunteer's potential for personal interaction with members and other volunteers; and the opportunity to make a contribution to the community. Extension agents should match volunteers with their life interests, recognize their community accomplishments, and involve them in the program's development phase (Culp & Schwartz, 1999).

Organizations could use this information to assess the motivations of potential volunteers and then strategically promote their organization in ways that speak to the abiding concerns of the volunteers they seek to recruit. They could also work to maximize the extent to which they provide volunteer opportunities that afford benefits matched to their volunteers' motivations and, in doing so, perhaps lessen the rate of turnover in their volunteer labor force (Clary et al., 1998).

CHAPTER III

METHODOLOGY

Purpose

The purpose of this study was to describe current Master Gardener and County Director perceptions of the Mississippi Master Gardener program. The program was described through motivation and retention factors, by incorporating the Voluntary Functions Inventory (VFI) Model along with the Master Gardener Social and Personal Benefits Survey (SPBS).

Research Objectives

Based on the purpose to incorporate the VFI model and the Master Gardener SPBS as it relates to volunteers, the following objectives were established:

1. Describe MS Master Gardeners' factors that motivated them to volunteer.
2. Describe MS Master Gardeners' current levels of satisfaction.
3. Describe MS Master Gardeners' perceptions of the benefits of the program.
4. Describe MS County Directors' perceptions of the benefits of the program.
5. Compare MS County Directors' and Master Gardeners' perceptions of the benefits of the program.

Research Design

This study primarily utilized a descriptive design along with an ex post facto design. Data was collected from a sample of County Directors within the MSUES with

participating counties and their county Master Gardeners. The collected data included information based on constructs from the adapted VFI model and additional variables relating specifically to Master Gardener demographics. This involved collecting data through email surveys from the County Directors who have a Master Gardener volunteer group in their county and the volunteers within these same counties. Both phases of the research and the survey instrument were approved ahead of time by the researcher's committee members and the Institutional Review Board of Mississippi State University for the Protection of Human Subjects in Research. The approval letter is located in Appendix A.

Population

The population for this study consisted of County Directors within the MSUES that have a Master Gardener volunteer group in their county, and also the volunteers themselves. According to the 2007 MS Master Gardener annual report, MS had 51 counties with an active Master Gardener group. In these counties, there were a total of 773 volunteers on the role (Mississippi Master Gardener Web site, 2007).

Research Variables

The variables are the motivational reasons for becoming involved and staying involved in the Master Gardener volunteer program. They were measured by the scores from the questions on the anchored surveys. There were six categories of the adapted VFI survey. The motivation function categories are *Values, Understanding, Enhancement, Career, Social, and Protective*.

The *Values* function is when the person is volunteering in order to express or act on important values, such as altruistic humanitarian concerns for others. The *Understanding* function is when the volunteer is seeking to permit new learning experiences and/or to exercise knowledge, skills, and abilities that are often unused. The *Enhancement* function is when the individual is seeking to grow and develop psychologically through involvement in volunteering and may reflect motivations concerning relationships with others. The *Career* function is when the volunteer has the goal of gaining career-related experience through volunteering. The *Social* function is when volunteering allows the person to strengthen one's social relationships. The *Protective* function is when the individual uses volunteering to reduce negative feelings, such as guilt, or to address personal problems and protect the ego from negative features of the self (Clary et al., 1998).

Instrumentation

The survey instruments found in Appendix B and C are an adaptation from Schrock et al. (2000b), Clary et al. (1998), and Rohs and Westerfield (1996) instruments. The original instrument by Clary (1998) was designed to measure the functions served by volunteerism, using the VFI model. The functional approach to volunteerism was predicated on the assumption that the motivations underlying volunteer activity can be identified and measured with some degree of precision.

The original instrument was tested by the researchers from samples of diverse populations as well as from a population of non-volunteers to demonstrate its' validity and reliability. Sub-sampling and cross-validation were also performed to confirm the results. Internal consistency was assessed by computing Cronbach's alpha coefficients

for each of the VFI scales: Career, .89; Enhancement, .84; Social, .83; Understanding, .81; Protective, .81; and Values, .80. The reliability coefficient used to assess the two scales used by Rohs and Westerfield (1996) were found to have a Cronbach's alpha coefficient of .88 for the societal value and .89 for the personal benefit.

The temporal stability of the VFI instrument was tested by having respondents complete the survey at two points in time. This was estimated by an assessment of the test-retest reliability of the scales. The correlation for the Values scale was .78; for Understanding and Enhancement, .77; for Social and Career, .68; and for Protective, .64 (all p -values < .001). This indicates that the individual VFI scales are stable over a one-month interval.

Demographic questions included age, gender, marital status, ages of children, household income, occupation, education level, and length of residence. Respondents were also asked to indicate in what year they took the initial training course, how many years they have been active, and their level of volunteer commitment time during the previous year. The wording was slightly modified with a few questions to meet the needs of this study. The survey was reviewed by members of the research committee to ensure face content and validity for the selected population.

Data Collection

A list of counties with Master Gardener volunteers who are members of the Mississippi Master Gardener Association (MMGA) was obtained from the state specialist in charge of the MMGA on January 10, 2009. The Master Gardener volunteer email addresses were obtained by contacting the County Directors in charge of these county groups and requesting them. Only members who were considered to be currently active were included in the list by the researcher. The total number of MMGA members

residing in MS was 773, based on information from the 2007 Master Gardener Annual Report. The county directors of the 51 counties were known by their employment with the MSUES and their email addresses were obtained in this way. The data collection methods used in this research ensured that each individual in the population had an opportunity to be included.

The initial Master Gardener survey was sent by email to 450 participants, which were determined by a computerized random sample. Forty-three were eliminated due to computer-related issues, leaving a total of 407 participants. The initial emailed survey was sent on April 9, 2009 and resulted in 117 responses. The first follow-up email to non-respondents was sent six days after the initial email and brought in 63 responses. The second follow-up email was sent five days after the first follow-up email and resulted in another 37 responses. The third and final follow-up email to non-respondents was sent five days after the second follow-up email and resulted in an additional 16 responses. This resulted in a total of 233 responses, with a response rate of fifty-seven percent.

The initial emailed County Director survey was sent on April 9, 2009 to 51 participants. The researcher was in this category and did not participate in the survey, leaving a total of 50 available participants. The County Directors were known to have a Master Gardener group in their county. This initial emailed survey resulted in 28 responses. The first follow-up email to non-respondents was sent six days after the initial email and brought in 13 responses. The second follow-up email was sent five days after the initial email and resulted in another 2 responses. The third and final follow-up email to County Director non-respondents was sent five days after the second follow-up email

and did not result in any additional responses. This resulted in a total of 43 responses, with a response rate of eighty-six percent.

To control for possible non-response bias, respondents were compared to non-respondents. A computerized random sample of 20 of the 174 Master Gardener non-respondents was taken to check for any differences. The 20 these were emailed selected demographic questions on May 14, 2009 to compare with respondents information previously received. Follow-up emails were sent on May 19th and May 26th to increase the chance of response.

Demographic questions asked to this group were age, gender, relationship status, education level, number of years at current residence, number of years active as a Master Gardener, and time volunteered as a Master Gardener during the previous year. There were 18 responses for a total of 90%. The results for this non-respondent group showed that they were similar to the respondents group. The majority had a mean age of 61. Most (94.4%) had at least some college experience. They had lived at their current residence for an average of 17.6 years. They had been active for 3.7 years and had volunteered an average of 52.5 hours of time during the previous year (Table 1). The majority of these respondents were also married (88.9%) females (77.8%) (Table 2).

Table 1 Demographic Means for MS Master Gardener Non-Respondents and Respondents

Parameter	Non-Respondents		Respondents		<i>p</i>
	Mean	SD	Mean	SD	
Age	61.0	10.53	61.2	9.11	.942
Years at Current Residence	17.6	11.08	16.2	12.67	.646
Years as an Active Master Gardener	3.7	2.95	4.2	3.29	.584
Hours Given as an Master Gardener	52.5	43.56	58.3	58.21	.715
Education	3.7	.96	4.0	.91	.210

Table 2 Demographic Percentages for MS Master Gardener Non-Respondents and Respondents

Parameter	Non-Respondents		Respondents		X^2
	Freq.	%	Freq.	%	
Gender					.457
Female	14	77.8	185	84.5	
Relationship status					.766
Married	16	88.9	185	84.5	
Single	1	5.6	24	11	
Divorced/Separated	1	5.6	10	4.6	

These two groups' means were compared by a One-Way ANOVA on the demographics of age, highest level of education, years living at current residence, years active as a Master Gardener, and hours volunteered in the previous year. All were found to be non-significantly different at the .10 a priori alpha level. Education had a significance level of $p = .210$, age $p = .942$, residence $p = .646$, years active $p = .584$, and hours volunteered $p = .715$. They were also compared with Chi-Square Tests of Independence on gender $p = .457$ and relationship status $p = .766$ and again found to be non-significant (Table 2). Based on these comparisons, non-respondents were judged to

be no different from respondents and results were generalized to all MS Master Gardeners.

The informed consent information was included as the first page of the emailed surveys and is shown in Appendix D and E. Participants agreed to take the survey by clicking on the survey link that was inserted in the email description. This letter also explained the importance of the survey, the benefits of the research, and the necessary instructions. It also stated support for this research from Dr. Melissa Mixon (Interim VP and Dean/Director MAFES and Extension). The letter explained the effect this study could have on the management practices of the MMGA as well as for the MSUES. Once the surveys were returned to the researcher by the survey provider (Survey Monkey), the participant's data were entered in SPSS without any names attached.

Data Analysis

The VFI model is comprised of six functions: *Values, Understanding, Enhancement, Career, Social, and Protective*. In order to analyze the relationship of these functions with the survey variables and examine the correlation between the two groups, a descriptive design along with an ex post facto design were the statistical methods chosen and were performed in SPSS version 15.0.

The researcher used descriptive statistics to determine demographics. These included means and standard deviations for continuous variables and frequencies and percents for categorical variables. The reasons for volunteering, levels of satisfaction, and benefits of the program were determined by using means and standard deviations. County Director scores were converted to be compared with Master Gardener scores on perceptions and were determined with an ex post facto design.

CHAPTER IV

FINDINGS

The purpose of this study was to describe current Master Gardener and County Director perceptions of the MS Master Gardener program. The Master Gardener program was described through motivation and retention factors by incorporating the VFI Model, along with the Master Gardener SPBS.

The literature review revealed that Extension Services have been assisting gardeners since the early 1900's with their horticulture needs. Personnel cuts and limited travel budgets for Extension have created a need for assistance to help with these gardening clients. One potential method of doing this is through the use of adult Master Gardener volunteers. Properly motivating these volunteers is a key aspect in maintaining them for use with gardening assistance (Clary et al., 1998).

In previous studies, the highest motivation factors were related to increased knowledge and understanding, followed by values and enhancement benefits (Schrock et al., 2000b). Motivation is an important factor for Extension services to use in order to retain these volunteers. These retained volunteers can offer several advantages for the program, such as having increased horticultural knowledge and experience, serving as recruiters, and mentoring new recruits (Stouse & Marr, 1992).

Based on the review of literature and to meet the stated purpose, five research objectives were developed. The first was to describe MS Master Gardener's factors that

motivated them to volunteer. The second was to describe MS Master Gardener's current levels of satisfaction. The third was to describe MS Master Gardener's perceptions of the benefits of the program. The fourth was to describe MS County Directors perceptions of the benefits of the program. The fifth was to compare MS County Directors perceptions to the MS Master Gardeners perceptions of the benefits of the program. The result of each objective is stated in the following sections.

Demographics of Mississippi Master Gardeners

Demographic questions included age, gender, marital status, ages of children, household income, occupation, level of education, and length at current residence. In addition, respondents were asked to indicate in what year they took the initial training, how many years they had been active as a Master Gardener volunteer, and their level of volunteer time commitment to the program during the past year.

The majority of respondents to the volunteer survey were married (85%) females (85%). While 87% had children, 72% of these children were now adults. Almost all had some level of college education (95%), with over 70% having graduated college. Retired individuals (52.4%) made up the largest category. Professional (14.6%) and homemakers (13.2%) were the next largest groups. Over 84% had an annual household income of at least \$40,000. Most (64.6%) were trained after 2005, with 26.7% being trained between 2000 and 2004, and only 8.9% being trained before the year 2000 (Table 3).

Table 3 Demographic Percentages for MS Master Gardeners

Parameter	N	%
Gender		
Female	185	84.5
Male	34	15.5
Relationship status		
Married	185	84.5
Single	24	11.0
Divorced/Separated	10	4.5
Ages of children		
Adult	171	73.4
None	30	12.9
College	18	7.7
Jr./Sr. High	13	5.6
Elementary/Preschool	7	3.0
Household income		
> \$60,000	113	61.1
\$40,000 to \$59,999	43	23.2
\$20,000 to \$39,999	23	12.4
< \$20,000	6	3.2
Occupation		
Retired	115	52.4
Professional/medical/education	32	14.6
Homemaker	29	13.2
Business/sales/service	23	10.4
Trade/technical	11	5.2
Other	9	4.2
Highest level of education		
Post graduate	78	35.8
College grad	75	34.4
Some college	54	24.8
High school grad	10	4.6
Some high school	1	0.5
Trained what year		
2005 to 2009	132	64.6
2000 to 2004	55	26.7
Before 2000	19	8.9

The average age for MS Master Gardener respondents was 61 years old and they had averaged living in their current residence for over 16 years. These individuals averaged being active in the program (giving at least 20 hours of volunteer time per year)

for over four years. They had also volunteered an average of 58 hours in the previous year (Table 4).

Table 4 Demographic Means for MS Master Gardeners

Parameter	N	Mean	SD
Age	200	61.2	9.11
Years at Current Residence	209	16.2	12.67
Years as an Active Master Gardener	202	4.2	3.29
Hours Given as an Master Gardener	179	58.3	58.21

Master Gardeners' Reasons for Volunteering

Thirty questions were used in the 'Reasons for Volunteering' section and were represented by each of the six categories described earlier. They are listed in Table 5 within the categories they represent.

Table 5 Master Gardener Survey questions asked for ‘Reasons for Volunteering’

Career

- 1. Volunteering as a Master Gardener can help me get my foot in the door at a place where I would like to work.
- 10. I can make new contacts that might help my business or career.
- 15. The Master Gardener program allows me to explore different career options.
- 21. Volunteering can help me to succeed in my chosen profession.
- 28. Master Gardener volunteer experience will look good on my resume.

Social

- 2. My friends volunteer as Master Gardeners.
- 4. People I'm close to want me to volunteer.
- 6. People I know share an interest in community service.
- 17. Others with whom I am close place a high value on community service.
- 23. Volunteering is an important activity to the people I know best.

Values

- 3. I am concerned about those less fortunate than myself.
- 8. I am genuinely concerned about the home gardeners I am serving.
- 16. I feel compassion toward people in need.
- 19. I feel it is important to help others.
- 22. I can do something for a horticultural cause that is important to me.

Enhancement

- 5. Volunteering makes me feel important.
- 13. Volunteering increases my self-esteem.
- 26. Volunteering makes me feel needed.
- 27. Volunteering helps me feel better about myself.
- 29. Volunteering is a way to make new friends.

Protect

- 7. No matter how bad I've been feeling, volunteering helps me to forget about it.
- 9. By volunteering as a Master Gardener I feel less lonely.
- 11. Doing Master Gardener volunteer work relieves me of some guilt over being more fortunate than others.
- 20. Volunteering helps me work through my own personal problems.
- 24. Volunteering is a good escape from my own troubles.

Understanding

- 12. I can learn more about horticulture and home gardening.
 - 14. Volunteering as a Master Gardener allows me to gain a new perspective on new things.
 - 18. Volunteering lets me learn horticulture through hands-on experience.
 - 25. I can learn how to deal with a variety of people as a volunteer.
 - 30. Through the Master Gardener program I can explore my own strengths.
-

In the reasons for volunteering section, a MANOVA was used to test the data. No differences were found between male and female participants, $F(6,208) = 1.558, p = .161$, between single, married, and divorced participants, $F(12,414) = 1.033, p = .417$, between levels of income $F(18,489) = 1.167, p = .284$, between levels of education, $F(18,580) = 1.153, p = .296$, between years initially trained, $F(12,390) = .969, p = .478$, between numbers of years active, $F(12,382) = 1.320, p = .204$, and between number of hours volunteered in previous year, $F(12,338) = 1.516, p = .116$, according to the Wilk's Lambda within the multivariate tests.

A significant difference was found between those participants who have children at home and those who do not, $F(6,222) = 3.072, p = .007$. The tests of between-subjects effects indicated a difference with the *Career* function, $F(1,227) = 15.318, MSE = 2.030, p < .001$. There were differences between means for those having no children at home ($M = 2.05$) and those having children at home ($M = 3.12$).

Respondents were asked to indicate their level of importance in doing volunteer work through the MSUES. Responses were based on a seven-point anchored scale from 1(not at all important/accurate) to 7 (extremely important/accurate). Overall means for the six principal functions of reasons for volunteering are reported in Table 6.

Master Gardener functions related to *Understanding* ($M = 5.61$) (gaining new learning experiences and exercising knowledge, skills, and abilities) and functions relating to *Values* ($M = 5.52$) (altruism and humanitarian concerns) headed the list. The *Enhancement* function (satisfactions related to personal growth and self-esteem) ranked third with a mean of 4.16. The *Social* function (concerning relationships with others) ranked fourth with a mean of 4.04. The *Protective* function (protecting ego from being

more fortunate than others and addressing one’s personal problems) ranked fifth with a mean of 3.18. The *Career* function (preparation for a new career) ranked the lowest with a mean of 2.20 (Table 6).

Table 6 Perceptions of ‘Reasons for Volunteering’ for MS Master Gardeners

Principal factor	N	Scale Mean	SD
Understanding	233	5.61	1.04
Values	232	5.52	1.04
Enhancement	232	4.16	1.48
Social	231	4.04	1.44
Protective	231	3.18	1.49
Career	230	2.20	1.49

Anchored scale: 1 = not at all important/accurate, 7 = extremely important/accurate

The rankings of specific reasons for volunteering with the MS program as perceived by Master Gardeners are listed in Table 7. Upon examining specific motivations for volunteering as a Master Gardener, eight of the top nine and ten of the top twelve reasons for volunteering were related to the *Understanding* or *Values* functions, with the top two reasons both receiving scores of 6.0 or greater. The first was to “learn more about horticulture and home gardening” ($M = 6.48$) and the second was to “learn horticulture through hands-on experience” ($M = 6.22$). Reasons three through eleven all had means greater than 5.0. Six of the next seven reasons were related to the *Enhance* and *Social* functions. Out of the ten least important reasons for volunteering, nine were related to the *Career* and *Protect* functions. “Volunteering as a Master Gardener can help me get my foot in the door at a place where I would like to work” was the response that ranked the lowest ($M = 1.89$).

Table 7 Ranking of ‘Reasons for Volunteering’ for MS Master Gardeners

Motivational factor	Cat	Mean	SD
1. I can learn more about horticulture/gardening.	U	6.48	.92
2. Volunteering lets me learn horticulture through hands on experience.	U	6.22	1.16
3. I feel it is important to help others.	V	5.98	1.28
4. I can do something for a horticultural cause that is important to me.	V	5.63	1.45
5. I am genuinely concerned about the home gardeners I am serving.	V	5.45	1.42
6. Volunteering as a Master Gardener allows me to gain a new perspective on things.	U	5.42	1.43
7. Volunteering is a way to make new friends.	E	5.38	1.56
8. I feel compassion toward people in need.	V	5.29	1.62
9. I am concerned about those less fortunate than myself.	S	5.19	1.54
11. Through the Master Gardener program I can explore my own strengths.	U	5.16	1.65
12. I can learn how to deal with a variety of people as a volunteer.	U	4.68	1.79
13. No matter how bad I’ve been feeling, volunteering helps to forget about it.	P	4.59	1.83
14. Others with whom I am close place a high value on service.	S	4.50	2.00
15. Volunteering is an important activity to the people I know best.	S	4.33	1.92
16. Volunteering increases my self-esteem.	E	4.13	1.85
17. Volunteering helps me feel better about myself.	E	4.10	1.98
18. Volunteering makes me feel needed.	E	4.00	1.98
19. My friends volunteer as Master Gardener’s.	S	3.30	1.97
20. Volunteering makes me feel important.	E	3.24	2.02
21. Volunteering is a good escape from my own troubles.	P	3.09	2.03
22. By volunteering as a Master Gardener I feel less lonely.	P	3.07	1.90
23. Volunteering helps me work through my own problems.	P	3.04	1.90
24. People I’m close to want me to volunteer.	S	2.92	1.91
25. The Master Gardener program lets me to explore different career options.	C	2.40	1.72
26. I can make new contacts that might help my business/career.	C	2.29	1.77
27. Master Gardener volunteer experience will look good on my resume.	C	2.25	1.71
28. Doing Master Gardener volunteer work relieves me of some of the guilt over being more fortunate than others.	P	2.09	1.54
29. Volunteering will help me to succeed in my chosen profession.	C	2.07	1.53
30. Volunteering as a Master Gardener can help me get my foot in the door at a place where I would like to work.	C	1.89	1.57

Anchored scale: 1 = not at all important/accurate, 7 = extremely important/accurate.

Master Gardeners’ Level of Satisfaction

The ‘Level of Satisfaction’ section contained twelve questions and a MANOVA was used to test the data. No differences were found between male and female participants $F(12,184) = .744, p = .707$, between single, married, and divorced

participants, $F(24,368) = .503, p = .977$, between levels of income $F(36,458) = .998, p = .475$, between levels of education, $F(36,538) = 1.128, p = .283$, between years initially trained, $F(24,354) = 1.118, p = .321$, between numbers of years active, $F(24,348) = 1.503, p = .063$, and between number of hours volunteered in previous year, $F(24,306) = 1.284, p = .172$, according to the Wilk's Lambda.

A significant difference was found between those participants who have children at home and those who do not, $F(12,190) = 2.068, p = .021$. The tests of between-subjects effects indicated a significant difference with the statement about "learning something new about the world by volunteering as a Master Gardener", $F(1,201) = 3.913, MSE = 2.121, p = .049$. Those with a child at home ($M = 5.6$) had a higher mean than those without a child at home ($M = 5.0$).

The rankings of level of satisfaction of the program as perceived by the volunteers themselves are listed in Table 8. The top ranking question was on the "likelihood of volunteering in the future" ($M = 6.20$). Also with a mean above 6.0 was the "level of enjoyment with the Master Gardener volunteer experience". Eleven of the twelve questions ranked above 5.0. Only the question about "learning some skills that will be useful in my future career by volunteering" ($M = 3.00$) ranked below 5.0. The overall mean for Master Gardener's level of satisfaction was 5.38, using the eleven questions available. The overall standard deviation was found to be 1.369.

Table 8 Ranking of ‘Levels of Satisfaction’ for MS Master Gardeners

Satisfaction level	Mean	SD
36. Based on your experience, how likely are you to volunteer for the Master Gardener program in the future?	6.20	1.11
31. How much do you enjoy your volunteer experience?	6.08	1.00
33. How worthwhile is your volunteer experience?	5.99	1.10
32. How personally fulfilling is your volunteer experience?	5.93	1.11
38. I gain a sense of accomplishment from my volunteering.	5.79	1.22
35. To what extent have you accomplished some good through your work as a Master Gardener volunteer?	5.62	1.09
41. The Master Gardener volunteer work I perform is appreciated?	5.51	1.35
39. I learn something new about the world by volunteering.	5.50	1.50
34. How important is your contribution to the program?	5.43	1.26
37. I am able to express my personal values through Master Gardener volunteer work.	5.23	1.58
40. Volunteering allows me to think about others instead of myself	5.13	1.69
42. I learn some skills that will be useful in my future career by volunteering as a Master Gardener.	3.00	2.14

Anchored scale: 1 = not at all satisfied/accurate, 7 = extremely satisfied/accurate.

Master Gardeners’ Perceptions of Benefits

In the benefits section, a MANOVA was used to test the data. No differences were found between male and female participants $F(6,197) = 1.714, p = .119$, between single, married, and divorced participants, $F(12,394) = .828, p = .622$, between those who have children at home and those who do not, $F(6,202) = .827, p = .550$, between levels of education, $F(18,552) = 1.551, p = .068$, between years initially trained, $F(12,376) = .650, p = .798$, between numbers of years active, $F(12,370) = 1.188, p = .289$, and between number of hours volunteered in previous year, $F(12,328) = .735, p = .717$, according to the Wilk’s Lambda.

There was a difference found between income levels for with the perception of benefits, $F(18, 470) = 1.649, p = .045$. According to the tests of between-subjects

effects, *Career* $F(3,171) = 3.973$, $MSE = .460$, $p = .009$ and *Values* $F(3,171) = 5.095$, $MSE = .678$, $p = .002$ were significantly different. With the *Career* function, those individuals earning more than \$60,000 ($M = 3.16$) had significantly different means from those earning \$20,000 to \$39,999 ($M = 3.60$) and those earning \$40,000 to \$59,999 ($M = 3.63$). With the *Values* function, those individuals earning more than \$60,000 ($M = 3.75$) had significantly different means from those earning \$40,000 to \$59,999 ($M = 4.25$).

This section contained 22 questions for Master Gardeners and was represented by each of the six categories described earlier. They are listed in Table 9 within the categories they represent.

Table 9 Master Gardener Survey questions asked for ‘Benefits’

Enhancement

- 43. Provides opportunity to assume responsibility.
- 44. Encourages individual independence.
- 55. I like the status of belonging to the Master Gardener program.
- 56. I like the flexibility I have as a Master Gardener to conduct the types of volunteer work I want.
- 57. I receive praise and recognition from being a Master Gardener.
- 59. The organization is regarded as highly prestigious in the community.
- 64. By becoming a Master Gardener volunteer I feel I can help alleviate some societal problems.

Career

- 45. Promotes feeling good about oneself to be able to perform life tasks.
- 53. Provides training for leaders in several skill areas I wanted to develop in myself.
- 54. There are certain economic benefits gained from being a Master Gardener.

Values

- 46. Provides adults with social rewards for productive effort.
- 51. Meets adults needs not met by other parts of society.
- 52. Contributes to community growth and development.

Understanding

- 47. Provides opportunity to learn about plants, soil, and horticultural topics.
- 48. Teaches knowledge and skills that contribute to the advancement of society.
- 49. Provides practical classroom instruction and hands-on experience in horticulture.
- 50. Provides educational benefits not provided by private horticulture areas.
- 63. Master Gardener materials (training, manuals, and newsletters) are excellent.

Protect

- 58. I felt I would have plenty of staff assistance after becoming a Master Gardener volunteer.

Social

- 60. As a Master Gardener I have gained the respect of people in my community.
 - 61. I became a Master Gardener volunteer because I wanted to meet more people.
 - 62. Many influential people in my community are Master Gardeners.
-

The overall means for the six principal functions of benefits provided by the MS program as perceived by the Master Gardeners are reported in Table 10. Respondents’

data most strongly indicated their agreement that the Master Gardener program provides benefits related to new learning experiences categorized as *Understanding*, $M = 4.40$. Benefits related to humanitarian concern and altruism (*Values*, $M = 3.94$), personal growth and self-esteem (*Enhancement*, $M = 3.62$), and related to one's career (*Career*, $M = 3.36$) followed from second through fourth places. Benefits related to guilt reduction over being more fortunate than others (*Protective*, $M = 3.30$), and to social reasons (*Social*, $M = 3.08$) concluded the list.

Table 10 Perception of 'Benefits' by MS Master Gardeners

<u>Benefit category</u>	<u>N</u>	<u>Scale Mean</u>	<u>SD</u>
Understanding	223	4.40	.55
Values	220	3.94	.71
Enhancement	219	3.62	.65
Career	217	3.36	.81
Protective	212	3.30	1.14
Social	216	3.08	.84

Anchored scale, 1 = strongly disagree, 5 = strongly agree.

The rankings of specific benefits provided by the MS program as perceived by the Master Gardeners themselves are listed in Table 11. The top eight benefits all received scores of 4.0 or greater on the five-point anchored scale. Five of the top six were related to gaining an increased knowledge and understanding. The top reason listed was “to provide opportunity to learn about plants, soil, and horticultural topics” ($M = 4.73$). The second reason listed was “to provide practical classroom instruction and hands-on experience in horticulture” ($M = 4.50$). Questions seven, eight, and ten were related to *Enhancement* functions. The three lowest rankings were related to *Social* ($M = 2.97$) and

Career ($M = 2.58$). The only question that tested the *Protect* ($M = 3.30$) function ranked 16th. The lowest ranked question stated “that there are certain economic benefits gained from being a Master Gardener” was in the *Career* ($M = 2.58$) function.

Table 11 Ranking of 'Benefits' for MS Master Gardeners

Benefit provided	Cat	Mean	SD
1. Provides opportunity to learn about plants, soil, and horticultural topics.	U	4.73	.53
2. Provides practical classroom instruction and hands-on experience in horticulture.	U	4.50	.67
3. Provides educational benefits not provided by private areas.	U	4.28	.80
4. Contributes to community growth and development.	V	4.25	.79
5. Teaches knowledge and skills that contribute to the advancement of society.	U	4.24	.83
6. Master Gardener materials (training manuals and newsletters) are excellent.	U	4.23	.84
7. I like the flexibility I have as a Master Gardener to conduct the types of volunteer work I want.	E	4.09	.90
8. Provides opportunity to assume responsibility.	E	4.00	.75
9. Provides adults with social rewards for productive effort.	V	3.89	.83
10. Encourages individual independence.	E	3.83	.82
11. Promotes feeling good about oneself to be able to perform life tasks.	C	3.82	.83
12. The Master Gardener program provides training for leaders in several skill areas I wanted to develop in myself.	C	3.64	1.06
13. Meets adult needs not met by other parts of society.	V	3.64	1.07
14. The organization is regarded as prestigious in the community.	E	3.64	.99
15. As a Master Gardener I have gained the respect of people in the community.	S	3.42	.94
16. I felt I would have plenty of staff assistance after becoming a Master Gardener volunteer.	P	3.30	1.14
17. I like the status of belonging to Master Gardener organization.	E	3.28	1.18
18. I receive praise and recognition from being a Master Gardener volunteer.	E	3.24	1.04
19. By becoming a Master Gardener volunteer I feel I can help alleviate societal problems.	E	3.16	1.10
20. I became a Master Gardener volunteer to meet more people.	S	2.97	1.17
21. Many influential people in community are Master Gardeners.	S	2.88	1.10
22. There are certain economic benefits gained from being a Master Gardener.	C	2.58	1.26

Anchored scale, 1 = strongly disagree, 5 = strongly agree.

County Directors' Perceptions of Benefits

Twenty-two questions for County Directors were used in the 'Benefits' section and were represented by each of the six categories previously described in the literature review. They are listed in Table 12 within the categories they represent.

Table 12 County Director Survey questions asked for 'Benefits'

Enhancement

1. Provides opportunity for volunteers to assume responsibility.
2. Encourages individual independence.
13. Provides a status for belonging to the Master Gardener organization.
14. Provides flexibility to conduct the types of volunteer work desired.
15. Provides praise and recognition for being a Master Gardener volunteer.
17. The organization is regarded as highly prestigious in the community.
22. Provides opportunity to help alleviate some societal problems.

Career

3. Promotes feeling good about oneself to be able to perform life tasks.
11. Provides training for leaders in several skill areas.
12. Provides certain economic benefits by being a Master Gardener.

Values

4. Provides adults with social rewards for productive effort.
9. Meets adult needs not met by other parts of society.
10. Contributes to community growth and development.

Understanding

5. Provides opportunity to learn about plants, soil, and horticultural topics.
6. Teaches knowledge and skills that contribute to the advancement of society.
7. Provides practical classroom instruction and hands-on experience.
8. Provides educational benefits not provided by private horticulture areas.
21. Master Gardener materials (training, manuals, and newsletters) are excellent.

Protect

16. Provides plenty of staff assistance after becoming a Master Gardener volunteer.

Social

18. Provides the respect of people in the community.
 19. Provides opportunity to meet more people.
 20. Many influential people in the community are Master Gardener's.
-

The overall means for the six principal functions of benefits provided by the MS Master Gardener program as perceived by the County Directors are reported in Table 13. Respondents' data showed that their agreement that the Master Gardener program provides benefits related to new learning experiences categorized as *Understanding* ($M=4.09$), and *Values* ($M=4.02$) benefits related to humanitarian concern and altruism. Those benefits related to *Social* ($M=3.94$) reasons, *Enhancement* ($M=3.83$) reasons of personal growth and self-esteem, and *Career* ($M=3.74$) ranked third through fifth. *Protective* ($M=3.52$) reasons related to guilt reduction over being more fortunate than others concluded the list.

Table 13 Perception of 'Benefits' by MS County Directors

Benefit category	N	Scale	
		Mean	SD
Understanding	42	4.09	.61
Values	42	4.02	.60
Social	42	3.94	.66
Enhancement	42	3.83	.55
Career	42	3.74	.54
Protect	42	3.52	.83

Anchored scale, 1 = strongly disagree, 5 = strongly agree.

County Directors were also asked how many years they had served in this supervisory role. Experience varied as the number of years working ranged from one year to twenty-two years. A correlation was run between County Directors with one year or less of experience and those with more than one year of experience to determine if they should be treated as separate groups. Correlations ranged from $-.173$ to $.24$, therefore, all County Directors respondents were considered to be as one group.

Descriptive statistics showed these forty-two County Directors to have a mean tenure of 6.76 years with a standard deviation of 5.656.

The rankings of specific benefits provided by the program as perceived by the County Directors themselves are listed in Table 14. The top ten benefits all received scores of 4.0 or greater on the five-point anchored scale. They were related to an increased knowledge and *Understanding, Values, Social, Enhancement, and Career*. Following the top-ranked benefits was a group of eight answers dominated by the *Understanding* and *Enhancement* benefits, with scores ranging from 3.95 to 3.69 on the five-point anchored scale. The only question that tested the Protect ($M = 3.52$) function ranked 20th. The question that discussed “providing certain economic benefits by being a Master Gardener” was ranked the lowest by County Directors ($M = 3.19$).

Table 14 Ranking of 'Benefits' for MS County Directors

Benefit provided	Cat	Mean	SD
1. Provides opportunity to learn about plants, soil, and horticultural topics.	U	4.55	.80
2. Contributes to community growth and development.	V	4.26	.67
3. Provides opportunity to meet more people.	S	4.26	.70
4. Provides opportunity for volunteers to assume responsibility.	E	4.14	.87
5. Provides adults with social rewards for productive effort.	V	4.12	.80
6. Promotes feeling good about oneself to be able to perform life tasks.	C	4.07	.68
7. Provides educational benefits not provided by private horticulture areas.	U	4.05	.80
8. Provides the respect of people in the community.	S	4.00	.73
9. Teaches knowledge and skills that contribute to the advancement of society.	U	4.00	.74
10. Provides flexibility to conduct the types of volunteer work desired.	E	4.00	.63
11. Provides training for leaders in several skill areas.	C	3.95	.80
12. Provides practical classroom instruction and hands-on experience.	U	3.95	.80
13. Encourages individual independence.	E	3.93	.65
14. Master Gardener materials (training, manuals, and newsletters) are excellent.	U	3.86	.75
15. The organization is regarded as highly prestigious in the community.	E	3.83	.76
16. Provides praise and recognition for being a Master Gardener volunteer.	E	3.81	.80
17. Provides status for belonging to the Master Gardener organization.	E	3.80	.76
18. Meets adult needs not met by other parts of society.	V	3.69	.72
19. Many influential people in the community are Master Gardeners.	S	3.55	.89
20. Provides plenty of staff assistance after becoming a Master Gardener volunteer.	P	3.52	.83
21. Provides opportunity to help alleviate some societal problems.	E	3.29	.74
22. Provides certain economic benefits by being Master Gardener.	C	3.19	.89

Anchored scale, 1 = strongly disagree, 5 = strongly agree.

Comparison of Master Gardener and County Director Perceptions

The overall perceived benefits determined by County Directors were slightly different than those perceived by Master Gardeners. Both groups had the *Understanding* function mean ranked highest and the *Values* functions mean ranked second highest. The Master Gardeners then followed those with *Enhancement*, *Career*, *Protect* and *Social*, for places three through six. The County Directors however, placed *Social* as third, *Enhancement* as fourth, *Career* as fifth, and *Protect* last.

The means for County Directors were higher for all functions except for *Understanding*. Grand means for the six functions are also listed below in Table 15. The highest two ranked functions are the same as what was found when Master Gardeners and County Directors were treated independently. The *Understanding* function was first and was the only function with a grand mean higher than 4.0. The other five were all higher than 3.0 on the five-point anchored scales, indicating favorable attitudes toward these benefits and outcomes of the MS Master Gardener program.

Table 15 Mean comparisons of County Director/Master Gardener perceptions of ‘Benefits’

Function	Group	N	Mean	SD	SE
Understand	County Director	42	4.08	.61	
	Master Gardener	209	4.40	.56	
	Grand	251	4.24		.048
Values	County Director	42	4.02	.60	
	Master Gardener	209	3.93	.72	
	Grand	251	3.98		.059
Enhance	County Director	42	3.83	.55	
	Master Gardener	209	3.61	.67	
	Grand	251	3.72		.055
Career	County Director	42	3.74	.54	
	Master Gardener	209	3.35	.82	
	Grand	251	3.55		.066
Protect	County Director	42	3.52	.83	
	Master Gardener	209	3.29	1.14	
	Grand	251	3.41		.093
Social	County Director	42	3.94	.66	
	Master Gardener	209	3.08	.85	
	Grand	251	3.51		.069

Anchored scale, 1 = strongly disagree, 5 = strongly agree.

A Multivariate Analysis of Variance (MANOVA) was used to determine if there were differences among the dependent variables simultaneously. The dependent variables were the six functions. The independent variable was Group with two levels, Master Gardener and County Director. MANOVA was used to control for the Family-Wise error inherent in running multiple One-Way ANOVAs. From the MANOVA, the Box’s M test of equality of covariance matrices indicated not having homoscedasticity, $p < .001$. Additionally, the Levene’s test of equality of error variances indicated not having

an equal error variance of the dependent variable across the groups, based on the Career function, $p = .010$. Although these two assumptions were violated, the researcher chose to rely on the robustness of the MANOVA, considering largely different sample sizes in the independent variable ($N_{\text{Master Gardener}} = 233$, $N_{\text{County Director}} = 43$), while using Hotelling's Trace as a more conservative option.

The two groups were found to be different on the six variables taken as a whole. The results indicated there was a statistically significant difference between the Master Gardeners and County Directors on the group of variables taken together, $F(6,244) = 13.067$, $p < .001$. A small to medium effect size of .243 was determined by the partial eta squared (Table 16).

Table 16 Multivariate Tests of 'Benefits' for County Directors and Master Gardeners

Effect	Value	F	Hyp df	Error df	Sig	Partial Eta. Sq.
Intercept - Hotelling's Trace	35.121	1428.25	6	244	.000	.972
Group - Hotelling's Trace	.321	13.07	6	244	.000	.243

The tests of between-subjects effects indicated a statistically significant difference between the groups on the functions *Enhance* $F(1,249) = 3.994$, $p = .047$, *Career* $F(1,249) = 8.356$, $p = .004$, *Understand* $F(1,249) = 11.001$, $p = .001$, and *Social* $F(1,249) = 37.839$, $p < .001$ (Table 17).

Table 17 Test of Between-Subjects Effects of ‘Benefits’ of County Directors & Master Gardeners

Source	DV	df	Mean Square	F	Sig.
Group	Enhance	1	1.679	3.994	.047
	Career	1	5.136	8.356	.004
	Values	1	.330	.677	.411
	Understand	1	3.523	11.001	.001
	Protect	1	1.960	1.631	.203
	Social	1	25.480	37.839	.000

The final question of the Master Gardener survey asked the participants to write any additional comments about their volunteer experience. There were a total of 84 responses by the participants. Of these 84 responses, 63 were labeled as positive, twelve were neutral, and nine were considered to be negative.

Some of the positive responses by participants about the program emphasized that they love it, it’s awesome, the people are great, the information is great, it’s a great service, and it is a very positive experience. One person stated “they have been rewarded with horticultural knowledge, friendships, and pride in their accomplishments of personally serving others in the community”. Another said “the Master Gardener program is a worthwhile organization for both the members and the community”.

Some of the negative responses by participants about the program emphasized that they felt the program is not convenient for people who work fulltime, it is difficult to attend lunch meetings when working, that more meetings need to be after regular work hours, and they did not like the setup of this particular survey. One responder stated “the Master Gardener program was not as service oriented as it could be”. Another said that

“Master Gardeners need to connect better to communities and need to be educators”.

One Master Gardener felt that the Extension Service is not necessarily close to Master Gardeners and lacks vision and focus.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Based on the data analysis, this chapter contains a summary of the research effort, conclusions from the findings of the research, and recommendations of the researcher.

Summary

The purpose of this study was to describe the current Master Gardener and County Director perceptions of the MS Master Gardener program. The Master Gardener program was described through motivation and retention factors, by incorporating the VFI Model, along with the Master Gardener SPBS. This study is of interest to the Mississippi Master Gardener Association (MMGA) and the MSUES. The MSUES could realize more effective methods of motivating and retaining its Master Gardener volunteers and the volunteers themselves would be motivated to remain a critical part of the MS Master Gardener program.

The researcher used two groups: the County Directors and the Master Gardeners. Motivation was measured through voluntary participant completion of an emailed survey. The researcher described five objectives: (1) to describe MS Master Gardeners' factors that motivated them to volunteer, (2) to describe MS Master Gardeners' current levels of satisfaction, (3) to describe MS Master Gardeners' perceptions of the benefits of the program, (4) to describe MS County Directors' perceptions of the benefits of the

program, and (5) to compare MS County Directors' and Master Gardeners' perceptions of the benefits of the program.

The research instruments were derived from previous works and permission was granted by the original researchers to use their instruments. Prior to conducting the survey research, County Director email addresses were obtained from their employment with the MSUES. Master Gardener email addresses were obtained from the County Directors involved with the study. A random sample of the Master Gardeners was taken before sending the email survey. The email explained the reason for the study, the voluntary participation, and the importance for both the MSUES and the MMGA. Surveys were emailed to all participants and they consented to participate in the survey by clicking on the provided survey link. Survey Monkey was used to distribute the survey and collect the data from all participants.

The dependent variable was the six motivational functions: *Career, Enhancement, Values, Protect, Social, and Understanding*. The independent variable was the group. The two levels were the Master Gardeners and County Directors. The research population was County Directors with a Master Gardener group and the Master Gardeners within those groups. The actual sample size in the final population was 50 County Directors and 407 Master Gardeners.

The researcher collected demographic information from all Master Gardener participants. These included age, gender, relationship status, ages of children, annual household income, occupation, highest level of education, in what year trained for the Master Gardener program, how many years living at current residence, how many years active as a volunteer, and how many hours volunteered in the previous year. Using SPSS

15.0, multivariate analysis of variance (MANOVA) was used to compare the two groups on the six functions.

Conclusions

There was no statistical difference found between respondents and non-respondents in this study. The majority of respondents were married females that had children. Almost all had some level of college education, and over 70% had graduated college. Both groups were retired individuals who averaged 61 years of age and had an annual household income of at least \$40,000. They had averaged living in their current residence for over 16 years, had been active in the program for over four years, and had also volunteered an average of 58 hours during the previous year.

Master Gardener Perceptions Toward the Program

Research Objective 1: Describe MS Master Gardeners' factors that motivated them to volunteer. Based on the findings, it can be concluded that MS Master Gardeners had favorable perceptions towards the program. Their mean on the 30 statements ranged from 2.20 to 5.61. The means for MS Master Gardener's reasons for volunteering were based on a scale of 1 (not at all important/accurate) to 7 (extremely important/accurate). Seventeen of the 30 questions ranked above the median value of 4.0. The top two reasons for volunteering were related to the *Understanding* and *Values* functions. The *Understanding* function relates to seeking new learning experiences and/or to exercise knowledge, skills, and abilities that are often unused. The *Values* function is when a person is volunteering to express or act on important values, such as altruistic human concerns for others. *Enhancement* and *Social* functions followed the first two with the

Protect and *Career* functions being ranked as least important. This mean order of functions is exactly the same as found by Schrock et al. (2000a) and similar to results found by Schrock et al. (2000b).

There were no differences found between gender, relationship status, income levels, education levels, year initially trained, number of years active, and number of hours volunteered during the previous year. A difference was indicated between those participants having children at home and those not having children at home. Those having a child at home had significantly higher means with *Career* reasons for volunteering.

The data also revealed that there were many reasons why MS Master Gardeners volunteered. They mainly volunteered to learn more about horticulture (gardening) and to help those in need. MS Master Gardeners stated that the program was a great service, the information was great, the people were great, and they loved it. One person said “they have been rewarded with horticulture knowledge, friendships, and pride in their accomplishments of personally serving others in the community”. As a group, they were not volunteering to protect their egos or to advance their careers.

Master Gardener Levels of Satisfaction

Research Objective 2: Describe MS Master Gardeners’ current levels of satisfaction. Based on the findings, it can be concluded that MS Master Gardeners had a favorable level of satisfaction with the program. Their means ranged from 3.0 to 6.20, on a scale of 1 (not at all satisfied/accurate) to 7 (extremely satisfied/accurate). The overall means for MS Master Gardener’s level of satisfaction were high. Eleven of the twelve

questions ranked above the median value of 4.0, indicating a high level of overall satisfaction with the MS Master Gardener program.

There were no differences found between gender, relationship status, income levels, education levels, year initially trained, number of years active, and number of hours volunteered during the previous year. A difference was indicated between those participants having children at home and those not having children at home. Those having a child at home had significantly higher means with the statement about “learning something new about the world by volunteering”.

The results shows long term intentions MS Master Gardeners to stay involved with the program ($M = 6.20$). Enjoyment ($M = 6.08$) of the program and having a worthwhile experience ($M = 5.99$) were also very important to participants. It was found to be personally fulfilling ($M = 5.93$) and provided a sense of accomplishment ($M = 5.79$) for participants. The research also indicated that these Master Gardeners are not interested in the Master Gardener program in order to advance their *Career* ($M = 3.00$). Overall, participants had very high levels of satisfaction with the MS Master Gardener program. They enjoyed their volunteer experience and it was worthwhile and personally fulfilling. One volunteer said it “was a worthwhile organization for both the members and the community”.

Master Gardener Perceptions of ‘Benefits’

Research Objective 3: Describe MS Master Gardeners’ perceptions of the benefits of the Master Gardener program. Based on the findings, it can be concluded that MS Master Gardeners had favorable perceptions about the benefits of the program. Their means ranged from 3.08 to 4.40 on a scale of 1 (strongly disagree) to 5 (strongly agree).

The overall mean for Master Gardener's perceptions of benefits was 3.62. Nineteen of the 22 questions ranked above the median value of 3.0.

Respondents most strongly indicated their agreement that the program provides benefits related to new learning experiences categorized as *Understanding* ($M = 4.40$). Values ($M = 3.94$) and enhancement ($M = 3.62$) functions followed next. The Career ($M = 3.36$), Protective ($M = 3.30$), and Social ($M = 3.08$) functions ended the list.

MS Master Gardeners felt the greatest benefits provided by the program were educationally related. The top three and five of the top six rankings of Master Gardener perceptions of benefits of the MS program were related to the *Understanding* function. The statement concerning providing an opportunity to learn about plants, soil, and horticulture topics ($M = 4.73$) ranked the highest on a scale of 1 (strongly disagree) to 5 (strongly agree). They also appreciated the personal knowledge that could be gained in horticulture through hands-on learning. The statement concerning providing practical classroom instruction and hands-on experience in horticulture ($M = 4.50$) ranked second. They felt this type of training allowed them to contribute to the advancement of society and to community growth.

There were no differences found between gender, relationship status, children at home or not, education levels, year initially trained, number of years active, and number of hours volunteered during the previous year. A difference was indicated between income levels. Those having an income of \$60,000 or more were less likely to consider the *Career* function as a benefit than were those earning \$20,000 to \$39,999 and those earning \$40,000 to \$59,999. Those having an income of \$60,000 or more were also less

likely to consider the *Values* function as a benefit than were those earning \$40,000 to \$59,999.

MS Master Gardeners appreciated the quality and availability of materials and felt they had the flexibility to conduct the types of volunteer tasks they desired. They also felt they were given the opportunity to assume responsibility and were provided with social rewards for their productive efforts. Schrock et al. (2000b) noted this recognition for efforts could help with retention rates.

The two lowest ranked statements were concerning many influential people in the community being Master Gardeners ($M = 2.88$) and certain economic benefits gained from being a Master Gardener ($M = 2.58$). This is in line with previous research (Schrock et al., 2000a, Schrock et al., 2000b).

Master Gardener's perceptions of the benefits of the program that were most important were involved with a desire to learn more about horticulture and gardening. Second most important was altruistic humanitarian concern for others. In other words, there was a perceived benefit to have an opportunity to help others. They did not see themselves as looking for an opportunity to advance their careers or social networks, but to learn more and to help those in need. One participant stated that they do not volunteer to gain praise or to help their self-esteem, just to help those that are less fortunate.

County Director Perceptions of 'Benefits'

Research Objective 4: Describe MS County Directors' perceptions of the benefits of the Master Gardener program. Based on the findings, it can be concluded that MS County Directors had favorable perceptions about the benefits of the program. Their means ranged from 3.52 to 4.09 on a scale of 1 (strongly disagree) to 5 (strongly agree).

The overall mean for County Directors' perceptions of benefits was 3.86. All 22 questions ranked above the median value of 3.0, with ten ranking above 4.00. This finding showed an overall positive perception by County Directors of the benefits of the MS Master Gardener program in each of the 6 functions.

They most strongly indicated their agreement that the MS Master Gardener program provides benefits related to new learning experiences (*Understanding*, $M = 4.09$). *Values* ($M = 4.02$) and *Social* ($M = 3.94$) functions followed next, while the *Enhancement* ($M = 3.83$), *Career* ($M = 3.74$) and *Protective* ($M = 3.52$) functions concluded the list.

MS County Directors felt the greatest benefits provided by the program were educationally related. The top six rankings of perceptions of benefits of the MS County Director program were very diverse. Five of the six functions were represented, only omitting the *Protective* function. The statement concerning "providing an opportunity to learn about plants, soil, and horticulture topics" ranked the highest ($M = 4.55$). They felt that the Master Gardener program also contributes to community growth and development (*Values*, $M = 4.26$), ranked second.

Providing an opportunity to meet more people (*Social*, $M = 4.26$) ranked third and providing an opportunity for volunteers to assume responsibility (*Career*, $M = 4.14$) ranked fourth. Promoting feeling good about oneself to be able to perform life tasks ($M = 4.07$) ranked sixth. Nine of the next eleven rankings were dominated by *Understanding* and *Enhancement* functions. The only function related to the *Protective* ($M = 3.69$) function ranked 18th.

The next to lowest ranked statement was concerning “providing an opportunity to help alleviate some societal problems” ($M = 3.29$). The lowest ranked statement regarded “certain economic benefits gained from being a Master Gardener” ($M = 3.19$). This lowest ranked statement was the same for the Master Gardeners perceptions.

Comparison of the Benefits Given by Ratings of Master Gardener and County Director Perceptions

Research Objective 5: Compare MS County Directors’ and Master Gardeners’ perceptions of the benefits of the program. County Director means were all higher than Master Gardener means, except for with the *Understanding* function. The two groups were also found to be statistically significant different on the six variables taken as a whole. There was a significant difference between the two groups with the dependent variables *Enhance*, $p = .047$, *Career*, $p = .004$, *Understanding*, $p = .001$, and *Social*, $p < .001$.

These data revealed that even though both Master Gardeners and County Directors ranked specific functions high, there were some differences among those rankings. Both groups ranked *Understanding* function first, but Master Gardeners felt it was more important than did County Directors. This shows Master Gardeners felt that new learning experiences were even more important than did County Directors. Both groups ranked the *Enhance*, *Career*, and *Social* functions similarly, but in all three cases the County Directors felt it was more important than did the Master Gardeners. This means County Directors were more likely to feel that Master Gardeners were in the program to socialize and to improve the career aspirations. There were no differences with the *Values* and *Protect* functions.

Recommendations - Recruiting

Survey results might give the intent of a candidate as to whether they are volunteering in the program for personal gain or to actually help others. It might also help in using background information (demographics) to screen out those candidates who are less likely to volunteer or who are only trying to advance their careers. This survey could even help with volunteer placement by matching participants' interests and reasons for volunteering with local group projects.

In order to successfully recruit adult volunteers, County Directors should focus on the positive name recognition of the Extension service; the volunteer's potential for personal interaction with other volunteers; and the opportunity to make a contribution to the community. Letting them know in advance how they can contribute to their local community would help increase their interest level. County Directors should also present volunteer hours needed as an opportunity, not as payback for training.

When they are recruiting volunteers, County Directors should be aware of who is the average person that becomes a MS Master Gardener. They are typically married females of retirement age who are educated and have children. This does not encompass all Master Gardeners, but does give direction of the most likely people to target to become Master Gardeners. Recruiting more influential people in the community to become Master Gardeners could also help with raising awareness in the program.

Many people join the Master Gardener program because they have a friend who is already a member. County Directors should be aware of these aspects when they recruit. Also, County Directors should make an effort to recruit more males into the program.

Since most males have been employed in the workforce, they may have connections that could assist the local county program.

Lastly, people with different needs are motivated differently and those in management positions should be aware of this. Those volunteers with a high need for achievement should be given challenging projects with reachable goals and provided with frequent feedback. Those with a high need for affiliation usually perform best in a group environment. Those with a high need for power should have the opportunity to manage others. If County Directors can be successful at this, they will help the group's members to be motivated and retained (McClelland, 1953).

Recommendations - Retaining

Using Master Gardeners based on their personal interest would most likely help to retain them within the program, since they would be doing things they like. If the Master Gardeners are happy with the community work they are performing, they will most likely remain with the program. Extension agents should recognize their Master Gardeners community accomplishments, and involve them in the program's project planning phase, as noted by previous research (Culp & Schwartz, 1999). Giving Master Gardeners praise for what they have done is a great method to motivate and retain them. Providing these Master Gardeners with ongoing learning opportunities is another key factor in motivating and retaining them. If Master Gardeners are going to continue to be helpful to the Extension service, they must continually receive advanced training. These advanced trainings must also be of interest to the volunteers in order to be helpful.

Most of these volunteers have reached a point in their life where they are retired and financially secure. They have most likely fulfilled all three levels of Alderfer's

(1972) ERG Theory: Existence, relatedness, and growth. If growth opportunities such as advanced trainings are not provided, these volunteers may regress to relatedness needs. If the County Director is able to recognize this, steps can be taken to concentrate on relatedness needs until the person is able to pursue growth again. This will require much effort for the County Director and they must pay close attention to the Master Gardeners' needs.

County Directors should expect some turnover or loss within the group as volunteers leave the program for numerous reasons, but retaining these Master Gardener volunteers can offer many advantages for the local program. These retained volunteers have increased horticultural knowledge and experience and can serve as walking advertisements for the program. These seasoned volunteers are usually a key aspect of getting things done in the local community. They can also serve as mentors to new volunteers to encourage their involvement, as noted by (Stouse & Marr, 1992). Keeping a good record of those who leave the program and why would also help with retention. County Directors could possibly realize methods to prevent certain volunteers from leaving.

Recommendations - Managing

Extension organizations should also use this survey information to assess the motivations of potential volunteers and then strategically promote the organization in ways that speak to the concerns of the volunteers they seek to recruit. The County Directors should also work to maximize the extent to which they provide volunteer opportunities that are matched to their volunteers' motivations. By doing this it would possibly lower the rate of turnover by volunteers, which affects everyone.

Volunteers will leave the program for numerous reasons, but outlining expectations of Master Gardeners in the beginning may help lessen this rate of leaving.

For success to occur, both groups need to have the same goals for the program. This can only come through dialog and communication between the local Master Gardener groups and the County Directors. County Directors need to give their expectations to Master Gardeners before they go through the MS Master Gardener Training Course. The more County Directors understands about motivation, the more likely they will be able to retain their volunteers. This is all important information for County Directors to keep in mind as they manage their Master Gardeners at the county level.

Suggestions for Future Research

Follow-up research of the same nature of this research should be done in a few years to see if Master Gardener's perceptions of the overall program have changed during that time. This would allow one to see if the MSUES has done a good job of managing Master Gardeners. Further work should also be done to determine the exact reasons MS Master Gardeners are leaving the program and at what rate. This would help to determine current retention rates and possibly determine methods to slow this process. Further research should also be performed to find methods to attract more males to the program, since they only currently make up about 15% of the population. Finding topics and areas of more interest to males would be one avenue to explore.

Further research should be performed to determine exactly what types of advanced training should be offered to keep Master Gardeners motivated. This would help keep Master Gardeners interested and involved with the program. There might be a desire to

create higher levels of achievement within the program for those individuals who seek a certain level of these advanced trainings.

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APPENDIX A
IRB APPROVAL LETTER



Mississippi State UNIVERSITY

Office of Regulatory Compliance

Post Office Box 6223
Mississippi State, MS 39762

Compliance Division
Administrative Offices
Animal Care and Use (IACUC)
Human Research Protection
Program (IRB)
1207 Hwy 182 West
Starkville, MS 39759
(662) 325-3496 - fax

Safety Division
Biosafety (IBC)
Radiation Safety
Hazardous Waste
Chemical & Lab Safety
70 Morgan Avenue
Mississippi State, MS 39762
(662) 325-8776 - fax

<http://www.orc.msstate.edu>
compliance@research.msstate.edu
(662) 325-3294

April 13, 2009

Jeffrey C. Wilson
P.O. Box 1386
Columbus, MS 39702

RE: IRB Study #09-052: Reasons for Volunteering, Experiences, and Outcomes for Mississippi State University Extension Service Master Gardener Volunteers

Dear Mr. Wilson:

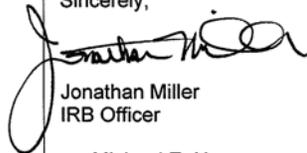
The above referenced project was reviewed and approved via administrative review on 4/9/2009 in accordance with 45 CFR 46.101(b)(2). Continuing review is not necessary for this project. However, any modification to the project must be reviewed and approved by the IRB prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The IRB reserves the right, at anytime during the project period, to observe you and the additional researchers on this project.

Please note that the MSU IRB is in the process of seeking accreditation for our human subjects protection program. As a result of these efforts, you will likely notice many changes in the IRB's policies and procedures in the coming months. These changes will be posted online at <http://www.orc.msstate.edu/human/aahrpp.php>.

Please refer to your IRB number (#09-052) when contacting our office regarding this application.

Thank you for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact me at jmiller@research.msstate.edu or call 662-325-2238.

Sincerely,



Jonathan Miller
IRB Officer

cc: Michael E. Newman

APPENDIX B
MASTER GARDENER SURVEY

Mississippi Master Gardener Survey

1. Reasons for Volunteering

Indicate your level of agreement with the following statements about reasons for volunteering as a Master Gardener.

	Not at all important/ accurate				Extremely important/ accurate		
	1	2	3	4	5	6	7
Volunteering as a Master Gardener can help me get my foot in the door at a place where I would like to work.	1	2	3	4	5	6	7
My friends volunteer as Master Gardeners.	1	2	3	4	5	6	7
I am concerned about those less fortunate than myself.	1	2	3	4	5	6	7
People I'm close to want me to volunteer	1	2	3	4	5	6	7
Volunteering makes me feel important.	1	2	3	4	5	6	7
People I know share an interest in community service.	1	2	3	4	5	6	7
No matter how bad I've been feeling, volunteering helps me to forget about it.	1	2	3	4	5	6	7
I am genuinely concerned about the home gardeners I am serving.	1	2	3	4	5	6	7
By volunteering as Master Gardener I feel less lonely.	1	2	3	4	5	6	7
I can make new contacts that might help my business or career.	1	2	3	4	5	6	7
Doing Master Gardener volunteer work relieves me of some of the guilt over being more fortunate than others.	1	2	3	4	5	6	7
I can learn more about horticulture and home gardening.	1	2	3	4	5	6	7

Volunteering increases my self-esteem.	1	2	3	4	5	6	7
Volunteering as a Master Gardener allows me to gain a new perspective on things.	1	2	3	4	5	6	7
The Master Gardener program allows me to explore different career options.	1	2	3	4	5	6	7
I feel compassion toward people in need.	1	2	3	4	5	6	7
Others with whom I am close place a high value on community service.	1	2	3	4	5	6	7
Volunteering lets me learn horticulture through hands-on experience.	1	2	3	4	5	6	7
I feel it is important to help others.	1	2	3	4	5	6	7
Volunteering helps me work through my own personal problems.	1	2	3	4	5	6	7
Volunteering will help me to succeed in my chosen profession.	1	2	3	4	5	6	7
I can do something for a horticultural cause that is important to me.	1	2	3	4	5	6	7
Volunteering is an important activity to the people I know best.	1	2	3	4	5	6	7
Volunteering is a good escape from my own troubles.	1	2	3	4	5	6	7
I can learn how to deal with a variety of people as a volunteer.	1	2	3	4	5	6	7
Volunteering makes me feel needed.	1	2	3	4	5	6	7
Volunteering helps me feel better about myself.	1	2	3	4	5	6	7
Master Gardener volunteer experience will look good on my resume.	1	2	3	4	5	6	7

Volunteering is a way to make new friends. 1 2 3 4 5 6 7

Through the Master Gardener program I can explore my own strengths. 1 2 3 4 5 6 7

2. Level of Satisfaction

Indicate your level of agreement with the following statements about your level of satisfaction with the Master Gardener program.	Not at all satisfied/ accurate				Extremely satisfied/ accurate		
How much do you enjoy your Master Gardener volunteer experience?	1	2	3	4	5	6	7
How personally fulfilling is your Master Gardener volunteer experience?	1	2	3	4	5	6	7
How worthwhile is your Master Gardener volunteer experience?	1	2	3	4	5	6	7
How important is your contribution to the Master Gardener program?	1	2	3	4	5	6	7
To what extent have you accomplished some "good" through your work as a Master Gardener volunteer?	1	2	3	4	5	6	7
Based on your experience, how likely are you to volunteer for the Master Gardener program in the future?	1	2	3	4	5	6	7
I am able to express my personal values through my Master Gardener volunteer work.	1	2	3	4	5	6	7
I gain a sense of accomplishment from my Master Gardener volunteer work.	1	2	3	4	5	6	7
I learn something new about the world by	1	2	3	4	5	6	7

volunteering as a Master Gardener.

Volunteering as a Master Gardener allows me to think about others instead of myself.	1	2	3	4	5	6	7
--	---	---	---	---	---	---	---

The Master Gardener volunteer work I perform is appreciated.	1	2	3	4	5	6	7
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I learn some skills that will be useful in my future career by volunteering as a Master Gardener.	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

3. Benefits

Indicate your level of agreement with the following statements about the benefits of the Master Gardener program.

	Strongly disagree			Strongly agree	
	1	2	3	4	5
Provides opportunity to assume responsibility.	1	2	3	4	5
Encourages individual independence.	1	2	3	4	5
Promotes feeling good about oneself to be able to perform life tasks.	1	2	3	4	5
Provides adults with social rewards for productive effort.	1	2	3	4	5
Provides opportunity to learn about plants, soil, and horticultural topics.	1	2	3	4	5
Teaches knowledge and skills that contribute to the advancement of society.	1	2	3	4	5
Provides practical classroom instruction and hands-on experience in horticulture.	1	2	3	4	5
Provides educational benefits not provided by private horticulture areas.	1	2	3	4	5
Meets adult needs not met by other parts of society.	1	2	3	4	5
Contributes to community growth and development.	1	2	3	4	5
The Master Gardener program provides training for leaders in several skill areas I wanted to develop in myself.	1	2	3	4	5

There are certain economic benefits gained from being a Master Gardener.	1	2	3	4	5
I like the status of belonging to the Master Gardener organization.	1	2	3	4	5
I like the flexibility I have as a Master Gardener to conduct the types of volunteer work I want.	1	2	3	4	5
receive praise and recognition from being a Master Gardener volunteer.	1	2	3	4	5
I felt I would have plenty of staff assistance after becoming a Master Gardener volunteer.	1	2	3	4	5
The organization is regarded as highly prestigious in the community.	1	2	3	4	5
As a Master Gardener I have gained the respect of people in the community.	1	2	3	4	5
I became a Master Gardener volunteer because I wanted to meet more people.	1	2	3	4	5
Many influential people in my community are Master Gardener's.	1	2	3	4	5
Master Gardener materials (training, manuals, and newsletters) are excellent.	1	2	3	4	5
By becoming a Master Gardener volunteer I feel I can help alleviate some societal problems.	1	2	3	4	5

4. About You

1. What is your gender? Male Female
2. What is your marital status? Single Married Divored/Seperated
3. What ages are your children?
 None Preschool Elementary Jr./Sr. High College Adult
4. What is your annual household income?
 < \$20,000 \$20,000 to \$39,999 \$40,000 to \$60,000 > \$60,000
5. What is the highest level of education you have attained?
 Some H.S. H.S. Grad Some College College Grad Post Graduate
6. What is your current age?
7. What is your occupation?
8. What is the zip code of your primary residence?
9. How many years have you lived at your current residence?
10. What year did you take the Master Gardener Training Course?
11. For how many years have you been active (20 hours or more of volunteer service per year) in the program?
12. How many hours of volunteer time did you commit to the Master Gardener program during the last year?
13. You may use the space below to write additional comments you may have about your Master Gardener volunteer experience.

APPENDIX C
COUNTY DIRECTOR SURVEY

Survey for Mississippi County Directors

1. Attitude Towards Program

Indicate your level of agreement with the following statements about the benefits of the Master Gardener program.

	Strongly disagree				Strongly agree
	1	2	3	4	5
Provides opportunity for volunteers to assume responsibility.	1	2	3	4	5
Encourages individual independence.	1	2	3	4	5
Promotes feeling good about oneself to be able to perform life tasks.	1	2	3	4	5
Provides adults with social rewards for productive effort.	1	2	3	4	5
Provides opportunity to learn about plants, soil, and horticultural topics.	1	2	3	4	5
Teaches knowledge and skills that contribute to the advancement of society.	1	2	3	4	5
Provides practical classroom instruction and hands-on experience.	1	2	3	4	5
Provides educational benefits not provided by private horticulture areas.	1	2	3	4	5
Meets adult needs not met by other parts of society.	1	2	3	4	5
Contributes to community growth and development.	1	2	3	4	5
Provides training for leaders in several skill areas.	1	2	3	4	5

Provides certain economic benefits by being a Master Gardener.	1	2	3	4	5
Provides a status for belonging to the Master Gardener organization.	1	2	3	4	5
Provides flexibility to conduct the types of volunteer work desired.	1	2	3	4	5
Provides praise and recognition for being a Master Gardener volunteer.	1	2	3	4	5
Provides plenty of staff assistance after becoming a Master Gardener volunteer.	1	2	3	4	5
The organization is regarded as highly prestigious in the community.	1	2	3	4	5
Provides the respect of people in the community.	1	2	3	4	5
Provides opportunity to meet more people.	1	2	3	4	5
Many influential people in the community are Master Gardener's.	1	2	3	4	5
Master Gardener materials (training, manuals, and newsletters) are excellent.	1	2	3	4	5
Provides opportunity to help alleviate some societal problems.	1	2	3	4	5
How long have you served in this County Director's role?					

APPENDIX D

MASTER GARDENER WELCOME LETTER AND CONSENT



April 9, 2009

Dear: Master Gardener Volunteers

The Master Gardener program began in Mississippi in 1992. It has now grown to cover over fifty counties and has more than seven-hundred and fifty members. These volunteers learn about numerous areas of horticulture through their trainings. These areas included: botany, soils, fruits/nuts, vegetables, turfgrass, ornamentals, propagation, weeds, insects, plant diseases, and even a few others. These trained volunteers help the Extension service in many ways. They answer clients' requests through phone calls and on-site visits; they help conduct meetings, write articles, and provide their gardening expertise to assist the Extension service.

I am conducting a survey to describe the perceptions of the Master Gardener program as seen by the Master Gardeners within the MSUES. This survey will hopefully allow the Extension service to more effectively utilize its Master Gardener volunteers. You only need to participate if you are a current Master Gardener volunteer. Permission for this survey has been granted by Dr. Melissa Mixon and will take less than 5 minutes to complete.

This survey is completely voluntary. You agree to participate by clicking on the Survey Monkey link below. You do not have to answer any question you do not want to answer and you can withdraw from the survey at any time. If you have any questions about this project, please feel free to contact Michael Newman at 662-325-3462 or Jeff Wilson at 662-328-2111. For additional information regarding human participation in research, please feel free to contact the Mississippi State University Regulatory Compliance Office at 662-325-2238.

Please go to the following link to complete the survey: www.surveymonkey.com. This link is identifies your email address so we can follow up with non-respondents using Survey Monkey. This link will be removed once your data have been collected.

Thank you for your assistance.

Sincerely yours,

Jeff Wilson
Area Horticulture Agent
MSU Extension Service

Michael Newman
Planning and Evaluation Specialist
MSU Extension Service

APPENDIX E
COUNTY DIRECTOR WELCOME LETTER AND CONSENT



April 9, 2009

Dear: MSUES County Directors

The Master Gardener program began in Mississippi in 1992. It has now grown to cover over fifty counties and has more than seven-hundred and fifty members. These volunteers learn about numerous areas of horticulture through their trainings. These areas included: botany, soils, fruits/nuts, vegetables, turfgrass, ornamentals, propagation, weeds, insects, plant diseases, and even a few others. These trained volunteers help the Extension service in many ways. They answer clients' requests through phone calls and on-site visits; they help conduct meetings, write articles, and provide their gardening expertise to assist the Extension service.

I am conducting a survey to describe the perceptions of the Master Gardener program as seen by the County Directors within the MSUES. This survey will hopefully allow the Extension service to more effectively utilize its Master Gardener volunteers. You only need to participate if you have an active Master Gardener group in your county. Permission for this survey has been granted by Dr. Melissa Mixon and will take less than 5 minutes to complete.

This survey is completely voluntary. You agree to participate by clicking on the Survey Monkey link below. You do not have to answer any question you do not want to answer and you can withdraw from the survey at any time. If you have any questions about this project, please feel free to contact Michael Newman at 662-325-3462 or Jeff Wilson at 662-328-2111. For additional information regarding human participation in research, please feel free to contact the Mississippi State University Regulatory Compliance Office at 662-325-2238.

Please go to the following link to complete the survey: www.surveymonkey.com. This link identifies your email address so we can follow up with non-respondents using Survey Monkey. This link will be removed once your data have been collected.

Thank you for your assistance.

Sincerely yours,

Jeff Wilson
Area Horticulture Agent
MSU Extension Service

Michael Newman
Planning and Evaluation Specialist
MSU Extension Service